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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/777,702

02/11/2004

Lawrence C. Gunn III

LUX-P022

5712

7590

10/03/2005

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EXAMINER

WONG, ERIC K

ART UNIT

PAPER NUMBER

2883

DATE MAILED: 10/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/777,702

Applicant(s)

GUNN ET AL.

Examiner

Eric Wong

Art Unit

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to <sup>application</sup> communication(s) filed on 2/11/04
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 24-26 is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-10 and 18-23 is/are rejected.
- 7) ☒ Claim(s) 8 and 11-17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f):
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 5, 6-7, 18-19, and 21-23 are rejected under 35 U.S.C. 102(e) as being anticipated by United States Patent Number 6,636,666 to Chan et al.

Chan et al. discloses a multi-wavelength light source comprising:

- A gain medium (EDFA) which emits light of a plurality of wavelengths in response to pumping disposed in an optical cavity;
- An optical equalizer (filters) in the optical cavity (column 4, lines 29-36) so as to provide more even optical power distribution.

As to claims 6-7, there are input ends and output ends with isolators.

As to claim 20, phase gratings are disclosed.

As to claims 21-22, a feedback mechanism is disclosed.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chan et al. as applied to claim 1 above.

Chan et al. discloses a multi-wavelength light source with multiple wavelengths (scaleable), but fails to explicitly disclose the number of wavelengths as claimed. Chan et al. does not limit the number of wavelengths used.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to configure the apparatus to work with a number of wavelengths as a matter of obvious design choice for its intended use.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chan et al. as applied to claim 1 above.

Chan et al. discloses Erbium doped amplification, but fails to explicitly disclose the use of an indium phosphide-based gain medium.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use indium phosphate in place of Erbium, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

6. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chan et al. as applied to claim 1 above.

Chan et al. discloses a multi-wavelength light source with anti-reflection coatings, but fails to explicitly disclose placement on a silicon-on-insulator (SOI) chip.

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to place the components of Chan et al. on a single SOI chip for the motivation of decreasing the amount of space needed and to make a compact device.

### *Claim Objections*

7. Claims 8, 11, 12, 13-17 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art made of record fails to explicitly disclose or reasonably suggest a ring resonator type structure, or an optical equalizer comprising a multiplexer and demultiplexer within an optical cavity.

### *Allowable Subject Matter*

8. The following is a statement of reasons for the indication of allowable subject matter: The prior art made of record fails to explicitly disclose or reasonably suggest a method or producing a plurality of optical outputs at different wavelengths using a resonating cavity. Therefore claims 24-25 are allowed. Claim 26 is allowed by virtue of dependency.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Wong whose telephone number is 571-272-2363. The examiner can normally be reached on Monday through Friday, 830AM - 430PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



EW



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